

IN THE CLAIMS

500C1 > 1. (Currently amended) A method of communicating information in a wireless cellular communication system, the method comprising the steps of:

communicating information between a plurality of subscriber units of the system and a base station in a cell of the system over at least one of an uplink and a downlink; and

B' separating communications on the uplink from communications on the downlink using orthogonal frequency division multiplexing by assigning, to one of the uplink and the downlink, k carriers in a set of M orthogonal frequency division multiplexed carriers in a given frequency band, and assigning to the other of the uplink and the downlink the remaining $M-k$ carriers in the set of M orthogonal frequency division multiplexed carriers in the given frequency band, wherein adaptive duplexing between the uplink and the downlink is achievable by varying the value of k .

2. (Original) The method of claim 1 wherein the system is a fixed wireless loop system.

3. (Currently amended) The method of claim 1 further including the step of separating communications with involving at least a subset of the plurality of subscriber units in the cell from one another using at least one of a code division multiple access, a time division multiple access technique and a frequency division multiple access technique.

4. (Canceled)

500C1 > 5. (Currently amended) The method of claim 4 1 further including the step of repeating the assigning step assignment of carriers for each of a plurality of time slots, such that the number of carriers in the first and second subsets varies assigned to the uplink and the number of carriers assigned to the downlink vary across the time slots in accordance with uplink and downlink traffic demands.

6. (Currently amended) The method of claim 4 1 further including the step of applying an inverse Fourier transform operation to the M orthogonal frequency division multiplexed carriers in at least one of a downlink transmitter and an uplink transmitter of the system.

7. (Currently amended) The method of claim 4 1 further including the step of recovering the M orthogonal frequency division multiplexed carriers by applying a Fourier transform operation in at least one of a downlink receiver and an uplink receiver of the system.

8. (Currently amended) An apparatus for communicating information in a wireless communication system, the apparatus comprising:

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a base station operative to communicate with a plurality of subscriber units ~~in a cell~~ of the system over at least one of an uplink and a downlink, wherein communications on the uplink are separated from communications on the downlink using orthogonal frequency division multiplexing by assigning, to one of the uplink and the downlink, k carriers in a set of M orthogonal frequency division multiplexed carriers in a given frequency band, and assigning to the other of the uplink and the downlink the remaining $M-k$ carriers in the set of M orthogonal frequency division multiplexed carriers in the given frequency band, and wherein adaptive duplexing between the uplink and the downlink is achievable by varying the value of k .

9. (Original) The apparatus of claim 8 wherein the system is a fixed wireless loop system.

10. (Currently amended) The apparatus of claim 8 wherein communications ~~with~~ involving at least a subset of the plurality of subscriber units ~~in the cell~~ are separated from one another using at least one of a code division multiple access, a time division multiple access technique and a frequency division multiple access technique.

11. (Canceled)

sub c' > 12. (Currently amended) The apparatus of claim 11 wherein the base station is further operative to repeat the assignment of carriers to uplink and downlink for each of a plurality of time slots, such that the number of carriers ~~in the first and second subsets varies~~ assigned to the uplink and the number of carriers assigned to the downlink vary across the time slots in accordance with uplink and downlink traffic demands.

13. (Currently amended) The apparatus of claim 11 wherein an inverse Fourier transform operation is applied to the M orthogonal frequency division multiplexed carriers in a transmitter of the system.

B cont. 14. (Currently amended) The apparatus of claim 11 wherein a Fourier transform operation is applied to recover the M orthogonal frequency division multiplexed carriers in a receiver of the system.

15. (Currently amended) An apparatus for communicating information in a wireless communication system, the apparatus comprising:

a subscriber unit operative to communicate with a base station ~~in a cell~~ of the system over at least one of an uplink and a downlink, wherein communications on the uplink are separated from communications on the downlink ~~using orthogonal frequency division multiplexing by~~ assigning, to one of the uplink and the downlink, k carriers in a set of M orthogonal frequency division multiplexed carriers in a given frequency band, and assigning to the other of the uplink and the downlink the remaining $M-k$ carriers in the set of M orthogonal frequency division multiplexed carriers in the given frequency band, and wherein adaptive duplexing between the uplink and the downlink is achievable by varying the value of k .

16. (Original) The apparatus of claim 15 wherein the system is a fixed wireless loop system.

17. (Currently amended) The apparatus of claim 15 wherein communications ~~with~~ involving at least a subset of ~~the~~ a plurality of subscriber units ~~in the cell~~ are separated from one another using

at least one of a code division multiple access, a time division multiple access technique and a frequency division multiple access technique.

18. (Canceled)

500 c' } 19. (Currently amended) The apparatus of claim 18 15 wherein the assignment of carriers to uplink and downlink is repeated for each of a plurality of time slots, such that the number of carriers in the first and second subsets varies assigned to the uplink and the number of carriers assigned to the downlink vary across the time slots in accordance with uplink and downlink traffic demands.

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 anal. 20. (Currently amended) The apparatus of claim 18 15 wherein an inverse Fourier transform operation is applied to the M orthogonal frequency division multiplexed carriers in a transmitter of the system.

21. (Currently amended) The apparatus of claim 18 15 wherein a Fourier transform operation is applied to recover the M orthogonal frequency division multiplexed carriers in a receiver of the system.